

REMARKS

Reconsideration of the present application in view of the amendments presented above, and the following remarks, is respectfully requested. It is submitted that entry of the amendments submitted in this response to the Final Action is appropriate because they do not present new issues for consideration and/or raise no new grounds for search. It is submitted that the amendments should be entered because they reflect the understating of what the invention is, as previously expressed by the applicants in their response of January 3, 2003, and the examiner in the Office Action of March 20, 2003, as will be discussed below. Accordingly, the amendments formalize the previous understanding, and for this reason, raise no new issues for consideration.

As indicated in the present Office Action, Claims 1, 3, 5, and 7 are rejected under 35 U.S.C. §103(a) as unpatentable in view of the combined teachings of applicant's so-called "admitted prior art" in view of JP 10-056009 ("Usami, et al.")

Claims 1 and 5, the two independent claims currently under consideration in the present application, have been amended herein to more particularly point out and distinctly claim what the applicants regard as their invention. In particular, the objection raised by the examiner in regard to 37 C.F.R. § 1.75, that claim 5 is a substantial duplicate of claim 1, has been addressed by amending claim 1 to indicate that the claimed semiconductor device has one wiring layer. In contrast, claim 5 recites a semiconductor device having a plurality of wiring layers.

Also, claim 1 has been amended to indicate that "the first SiOF insulating film is in contact with the wirings only at the wiring gap portion and is not in contact with the upper side of the wirings" and claim 5 has been amended to indicate that "the first SiOF interlayer insulating film is in contact with the wirings only at the wiring gap portion and is not in contact

with the upper side of the wirings.” In rejecting the pending claims in the March 20, 2003 office action, the examiner acknowledged that the so-called admitted prior art fails to disclose that the fluorine concentration of the SiOF insulating film at a wiring gap portion is set to be higher than the fluorine concentration of the SiOF insulating film on the upper side of the wirings. To cure this deficiency, the examiner relied upon Usami et al (“Usami”), which he contends “discloses a semiconductor device where the fluorine concentration of the SiOF at the wiring gap is higher than the concentration of the insulating film on the upper side of wirings.” He thus concluded that “it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Applicant’s Admitted Prior Art to include a higher fluorine concentration of SiOF at the wiring gap than the concentration of the insulating film on the wirings as disclosed in Usami because it reduces the capacitance among the wiring therefore resulting in a high operating speed.” Office Action of March 20, 2003.

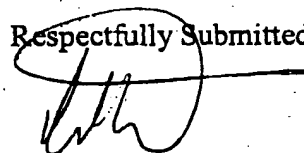
The applicant previously indicated in their response of January 3, 2003 that, “Usami, et al. teach a device in which there are two insulating layers between the wirings, one having a device in which there are two insulating layers between the wirings, one having a higher fluorine concentration (102) and one having a low fluorine concentration (103). In Usami, et al. the higher fluorine film (103) contacts the upper side of the wiring. Thus, the combination of Usami, et al. and the prior art would suggest a higher concentration at the upper side of the wirings. Thus, the combination of Usami, et al. and the prior art would suggest a higher concentration at the upper side of the wirings. By contrast, as shown by the drawings in the device of the present invention and as discussed above, the *higher fluorine film of the present invention contacts only the wire gap area and not the upper side wiring.*” Response of Office Action of December 30, 2002. (Emphasis added).

Claim 1 and 5 are amended herein to reflect, as italicized above, that the higher fluorine film contacts only the wire gap area, and not the upper side of the wiring. It is submitted that as amended, the present claims are in condition of allowance. In the March 20, 2003 office action, the examiner indicated that this point of distinction between the applicant's invention and the combination relied upon by the examiner was not presented in the claims, a condition addressed in the claims presented in this paper.

It is submitted that this distinction mitigates in favor of patentability. While figures 1(a) and 1(b) of Usami show the purported higher fluorine insulating layer 102 contacting the upper side of the wiring, in contrast, Figure 5 of the present invention shows the higher fluorine-containing insulation layer in contact *only* with the wiring gap area, and not with the upper side of the wiring. Accordingly, it is submitted that the present invention, as related in the claims, is patentable in view of the structural distinction between it and the combined teachings of the so called admitted prior art in view of Usami et al.

Wherefore, based upon the foregoing, it is respectfully submitted that the claims are in condition of allowance, and a relatively early reply to this page would be greatly appreciated.

Respectfully Submitted,



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